

The spillover effects of affordable housing developments on neighbors' political participation

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Motivation

- ▶ Housing costs are an **increasing burden** for families
 - ▶ Intensifies demand for **subsidized housing** → place-based policy
- ▶ Place-based policies create **spillover effects**
 - ▶ Impact extends beyond direct residents
- ▶ Understanding these effects is crucial for policy decisions

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Research Design

Research Question

What are the spillover effects of affordable housing developments on neighbors' political participation?

- ▶ Study the **Low-Income Housing Tax Credit (LIHTC)**
 - ▶ **Largest source** of new affordable housing in U.S. (\$13.5B in 2023)
- ▶ Data: **598 NC developments** + **Voter records** (2006-2022)
- ▶ Method: Compare residents **near** vs. **slightly farther** from developments

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Preview of Findings

Main Effects:

- ▶ **Turnout & Registration:** -0.23 to -0.25 pp per election
- ▶ Effects grow linearly over time (at least 8 elections)

Key Mechanism

- ▶ **Not** moving away, felonies, or death
- ▶ Driven by **persistent inactivity**
- ▶ Social spillovers + reduced party mobilization

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Roadmap

- 1 Introduction
- 2 Setting & Data**
- 3 Empirical Strategy
- 4 Results
- 5 Mechanisms
- 6 Conclusion

LIHTC Program

▶ Program Overview

- ▶ Largest affordable housing program in U.S. (est. 1986)
- ▶ Tax credits to developers; units affordable 15+ years
- ▶ NC: competitive process, mostly 100% affordable units

▶ NC Tenant Profile (2022)

- ▶ Median income: **\$17,400**; 48% below 30% AMI
- ▶ 71% African American; over half need rental assistance

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Data

▶ HUD:

- ▶ 598 projects (2007-2022), avg. 67 units
- ▶ Development size, New vs. rehabilitated, proportion of affordable units
- ▶ Location

▶ NC Voter Files:

- ▶ Panel of population of NC registered voters (2006-2022)
- ▶ Registration, turnout, demographics, de-registration reasons
- ▶ Registered address → precise longitude and latitude

▶ Census & NC One Map: neighborhood characteristics

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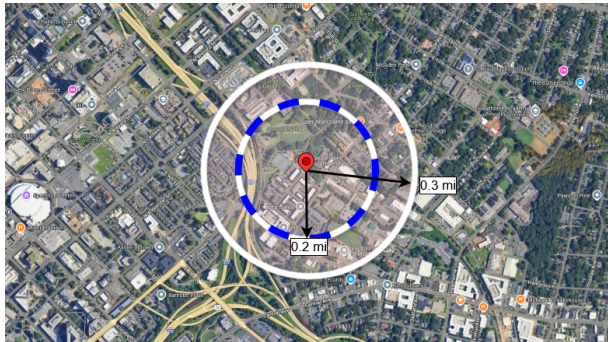
▶ Census & NC One Map: neighborhood characteristics

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Near-Far Ring Method

- ▶ Identification
 - ▶ **Treatment**: within 0.2 miles
 - ▶ **Control**: 0.2-0.3 miles
 - ▶ Focus on baseline registrants
- ▶ Frictions in development → Quasi-random treatment



Empirical Refinements

▶ Exact Matching

- ▶ Match on development, first election in data, 3 pre-period election turnout and registration – “match-groups”
- ▶ Creates more comparable treatment & control

▶ Sample Trimming

- ▶ Some treatment areas are initially more disadvantaged
- ▶ Drop developments where treatment to eliminate statistically significant imbalances

Balance

- ▶ Final Sample: 508 developments, 9,133 match-groups, ~ 1.3 million registrant-development-elections

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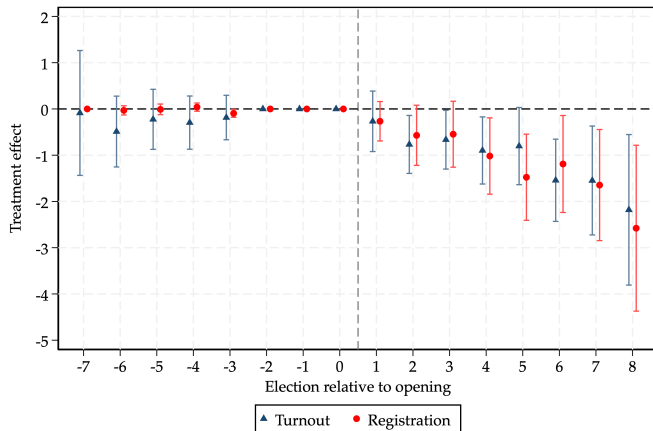
Estimation: Event Study

For registrant-event i , in match-group g , during relative election τ :

$$Y_{i\tau} = \beta_{\tau} \text{Treat}_i + \gamma_{g\tau} + \epsilon_{i\tau}$$

- ▶ $Y_{i\tau}$: Outcome – Turnout (General)/Registration
- ▶ Treat_i : Dummy for inner-circle at baseline
- ▶ β_{τ} : Treatment effect $\rightarrow$ coefficient of interest
- ▶ $\gamma_{g\tau}$: Match-group FE

Event Study: Main Outcomes



- ▶ No pre-trends
 - ▶ Validates strategy
- ▶ Post-completion
 - ▶ Both decline
 - ▶ Grow linearly

Estimation: Main Specification (Linear Trend)

Given the event study results, for our main analysis we fit:

$$Y_{i\tau} = \beta \cdot \underbrace{(\text{Treat}_i \times \tau \times 1\{\tau > 0\})}_{\text{Years since development placement}} + \gamma_{g\tau} + \epsilon_{i\tau}$$

- ▶ Fits only one coefficient with easy interpretation
- ▶ β is the treatment effect of being around an LIHTC development for one additional election

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Main Results

	Turnout			Registration		
	(1)	(2)	(3)	(1)	(2)	(3)
Effect per election	-0.233*** (0.069)	-0.220*** (0.069)	-0.225*** (0.074)	-0.249*** (0.080)	-0.225*** (0.077)	-0.243*** (0.084)
Pre-treatment mean	38.6	38.6	38.6	75.1	75.1	75.1
Neighborhood controls		✓			✓	
Registrant-dev. FE			✓			✓
Registrant-developments	148,345	148,345	148,345	148,345	148,345	148,345
Registrant-dev.-elections	698,333	698,333	1,335,105	698,333	698,333	1,335,105

Per-Election Effects

- ▶ Turnout: **-0.233 pp**
- ▶ Registration: **-0.249 pp**

Cumulative

- ▶ 4th election: ~ 1 pp
- ▶ 8th election: ~ 2 pp

Robustness Checks

▶ Data Construction

- ▶ Census geocoder only: similar Census
- ▶ Single-event exposure: similar

▶ Treatment Definition

- ▶ Alternative radii: effects localized <0.2 miles Radii
- ▶ Continuous treatment: similar Continuous

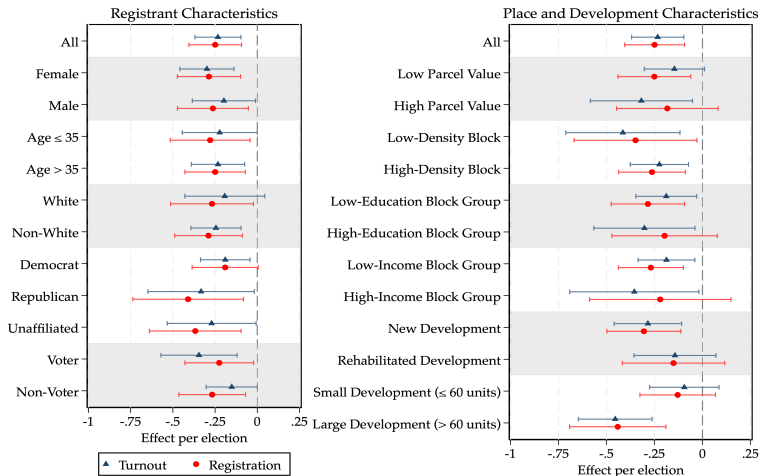
▶ Match-Groups

- ▶ Five alternatives: consistent Match Groups

▶ Placebo Tests

- ▶ Funding date (not placement): no stat. sig. effects at 95% confidence level Allocation
- ▶ Artificial early dates: no stat. sig. effects before actual treatment Placebo

Heterogeneity



► All groups affected

► Larger for:

- Republicans
- New develops.
- Large develops.

Details

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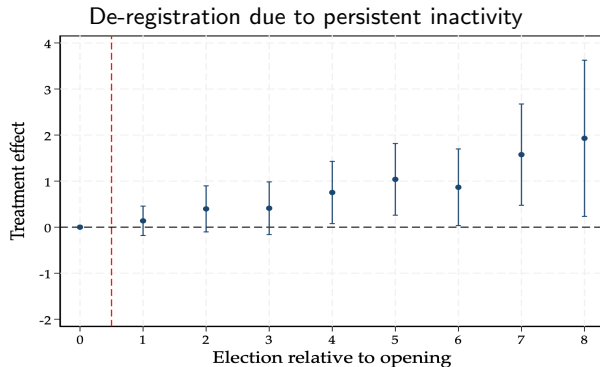
Exploring Mechanisms

We have data on why people are de-registered...

Four Testable Mechanisms:

1. **Moving:** Disruption, admin burdens, loss of community
2. **Felonies:** Crime → convictions → lose voting rights
3. **Death:** Changes in neighborhood affect mortality
4. **Persistent inactivity:** Political disengagement

De-registration: Which Mechanism?



Finding

- ▶ **No effects** on:
 - ▶ Moving
 - ▶ Felonies
 - ▶ Death
- ▶ **Large effect** on inactivity
- ▶ Mirrors registration pattern

Other Reasons

Why Persistent Inactivity?

- ▶ Influx of low-engagement residents
 - ▶ LIHTC brings low-income households
 - ▶ Low turnout, political knowledge, engagement
- ▶ Social spillovers
 - ▶ Negative peer effects
 - ▶ Weakened civic norms
- ▶ Strategic parties/campaigns
 - ▶ Target high-turnout areas
 - ▶ De-prioritize low-engagement neighborhoods
 - ▶ Less mobilization and outreach
- ▶ Mutually reinforcing pathways

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Key Findings

- ▶ LIHTC completion → **steady decline** in participation
- ▶ -0.23 to -0.25 pp per election; linear growth (8+ elections)
- ▶ **Mechanism:** Persistent inactivity (not mobility/felonies/death)

▶ Magnitude

- ▶ Modest but grows over time; **unintentional** treatment
- ▶ Comparable to voting policies in medium/long run

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Policy Implications

- ▶ Not an argument against affordable housing
 - ▶ LIHTC critical for housing crisis
 - ▶ Highlights **unintended consequence**
- ▶ Mitigation Strategies
 - ▶ Community-building events
 - ▶ Targeted mobilization campaigns
- ▶ Policy Design
 - ▶ Prioritize smaller/rehabilitated developments
 - ▶ Greater mix of affordable and market-rate units
 - ▶ Voucher systems promoting integration
 - ▶ Weigh housing benefits vs. political voice costs

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Thank You!

Questions?

Summary Statistics

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	Treatment		Control	
	Mean	SD	Mean	SD
Distance	0.13	0.06	0.25	0.03
Age	46.4	18.8	45.7	18.7
Male	0.40	0.49	0.42	0.49
White	0.43	0.50	0.45	0.50
Non-White	0.57	0.50	0.55	0.50
Democrat	0.58	0.49	0.56	0.50
Republican	0.18	0.38	0.18	0.39
Unaffiliated	0.24	0.43	0.26	0.44
Turnout	0.46	0.50	0.48	0.50
Dies in the sample period	0.10	0.30	0.09	0.29
Log(parcel value)	10.5	1.1	10.5	1.0
Log(block population density)	7.2	1.0	7.2	1.0
Block-group share college graduates	0.25	0.19	0.26	0.19
Log(block-group median hhld. income)	10.4	0.50	10.5	0.52
Registrant-developments	69,549		78,796	

LIHTC Project Statistics

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	Analysis sample		Dropped sample		North Carolina		Rest of the U.S.	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Year placed in service	2014.1	4.5	2013.8	4.8	2014.2	4.6	2013.6	4.5
New construction	0.75	0.44	0.83	0.38	0.76	0.43	0.54	0.50
[I]Years between credit allocation and placement	2.33	2.07	2.78	3.90	2.39	2.42	1.61	3.13
Total units	66.5	31.9	70.1	36.4	67.0	32.4	80.0	81.4
Share of rent-capped units	0.99	0.06	1.00	0.01	0.99	0.05	0.92	0.23
Developments	508		90		605		18,369	

Conditional Balance

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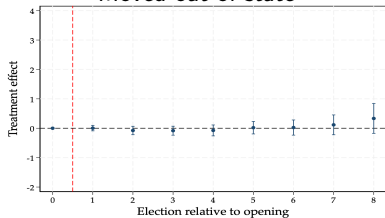
	Treatment – Control	
	Before trimming	After trimming
Age	1.040*** (0.266)	0.467* (0.246)
Male	-0.022*** (0.004)	-0.020*** (0.004)
White	-0.027*** (0.008)	-0.025*** (0.009)
Democrat	0.019*** (0.004)	0.016*** (0.004)
Republican	-0.011*** (0.003)	-0.009*** (0.003)
Turnout	0.000 (0.000)	0.000 (0.000)
Dies in the sample period	0.010*** (0.003)	0.002 (0.002)
Log(parcel value)	-0.082** (0.032)	0.021 (0.025)
Log(block population density)	0.015 (0.025)	0.019 (0.022)
Block-group share college graduates	-0.003 (0.003)	-0.000 (0.003)
Log(block-group median hhld. income)	-0.022** (0.009)	-0.009 (0.008)
Registrant-developments	164,928	148,345

Trimming eliminates imbalances in disadvantage index

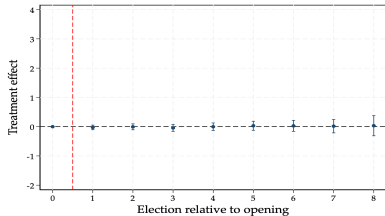
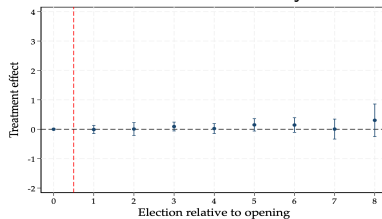
De-registration Reasons

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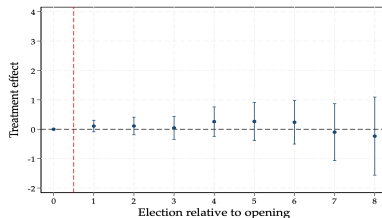
Moved out of state



Moved out of county



Felony conviction



Death

Heterogeneity: Registrant

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	Gender		Age		Race		Party Affiliation			Voted in Baseline	
	Female	Male	≤ 35	> 35	White	Non-White	Democrat	Republican	Unaffiliated	Yes	No
<i>Panel A: Turnout</i>											
Effect per election	-0.298*** (0.082)	-0.198** (0.096)	-0.222* (0.113)	-0.233*** (0.080)	-0.192 (0.121)	-0.245*** (0.076)	-0.190** (0.075)	-0.333** (0.161)	-0.270** (0.134)	-0.345*** (0.115)	-0.151* (0.077)
Pre-treatment mean	40.2	37.4	22.6	49.0	43.7	35.5	42.4	44.5	29.3	61.8	15.2
Registrant-dev.-elections	430,568	289,525	246,079	477,077	335,199	389,404	425,394	129,121	155,979	332,034	405,961
<i>Panel B: Registration</i>											
Effect per election	-0.286*** (0.095)	-0.263** (0.107)	-0.279** (0.121)	-0.250*** (0.091)	-0.268** (0.125)	-0.289*** (0.102)	-0.190* (0.100)	-0.410** (0.167)	-0.367*** (0.139)	-0.225** (0.104)	-0.267*** (0.101)
Pre-treatment mean	75.0	73.7	59.0	83.7	79.1	70.8	78.0	79.3	64.6	78.5	70.3
Registrant-dev.-elections	430,568	289,525	246,079	477,077	335,199	389,404	425,394	129,121	155,979	332,034	405,961

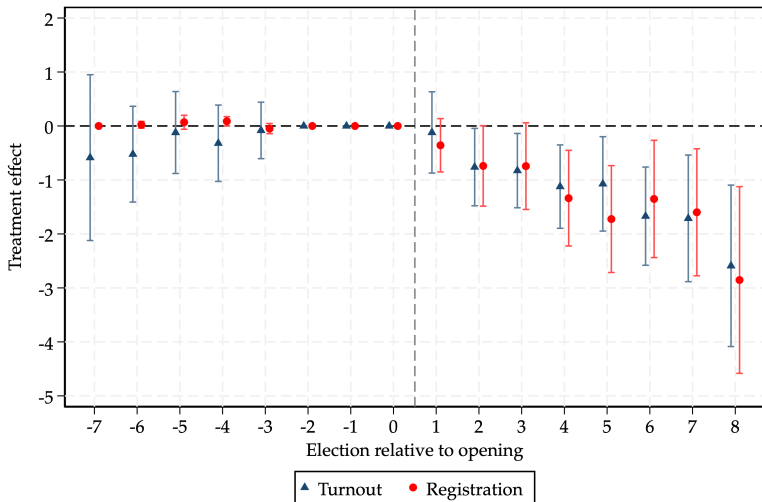
Heterogeneity: Place

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	Parcel Value		Block Population Density		Block-Group Education		Block-Group Income		Development Type		Development Size	
	Low	High	Low	High	Low	High	Low	High	New	Rehabilitated	Small	Large
<i>Panel A: Turnout</i>												
Effect per election	-0.146*	-0.318**	-0.414***	-0.224***	-0.189**	-0.302**	-0.187**	-0.355**	-0.284***	-0.143	-0.094	-0.454***
	(0.080)	(0.136)	(0.152)	(0.077)	(0.081)	(0.134)	(0.075)	(0.172)	(0.090)	(0.109)	(0.092)	(0.098)
Pre-treatment mean	36.2	45.0	43.3	38.1	37.8	40.6	38.9	39.5	39.6	37.4	42.8	37.2
Registrant-dev.-elections	500,168	225,043	124,538	602,147	452,394	282,064	531,880	202,811	504,157	233,838	379,925	358,070
<i>Panel B: Registration</i>												
Effect per election	-0.250***	-0.183	-0.349**	-0.263***	-0.284***	-0.197	-0.269***	-0.220	-0.305***	-0.151	-0.129	-0.441***
	(0.097)	(0.135)	(0.163)	(0.089)	(0.097)	(0.140)	(0.086)	(0.188)	(0.098)	(0.136)	(0.100)	(0.128)
Pre-treatment mean	73.9	75.5	79.3	73.3	76.2	72.3	76.0	71.2	73.8	76.4	80.5	71.4
Registrant-dev.-elections	500,168	225,043	124,538	602,147	452,394	282,064	531,880	202,811	504,157	233,838	379,925	358,070

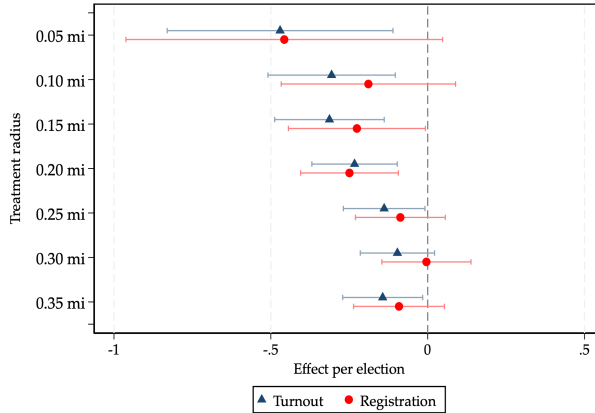
Census Geocoder Only

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Alternative Radii

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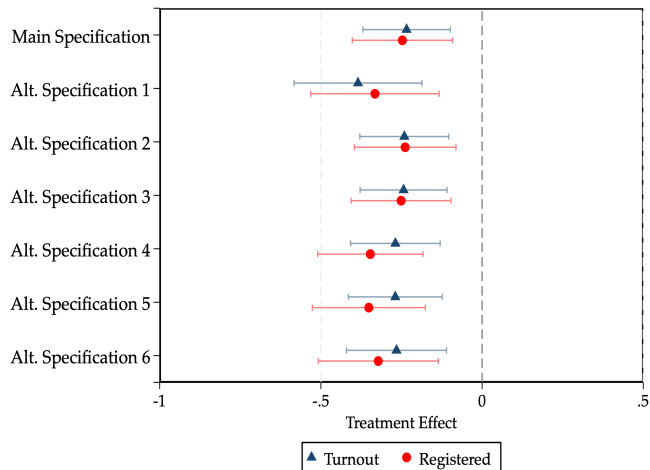
Continuous Treatment

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	Turnout		Registration	
	Main	Linear	Main	Linear
Effect per election	-0.233*** (0.069)	-0.240*** (0.060)	-0.249*** (0.080)	-0.229*** (0.080)
Pre-treatment mean	38.6	38.9	75.1	74.7
Registrant-developments	148,345	159,105	148,345	159,105
Registrant-dev.-elections	698,333	734,445	698,333	734,445

Alternative Match Groups

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Placement vs. Allocation

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	Turnout		Registration	
	Placement	Allocation	Placement	Allocation
Effect per election	-0.233*** (0.069)	-0.120* (0.072)	-0.249*** (0.080)	-0.081 (0.084)
Pre-treatment mean	38.6	38.2	75.1	77.5
Registrant-developments	148,345	127,997	148,345	127,997
Registrant-dev.-elections	698,333	672,501	698,333	672,501

Placebo Tests

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Treatment offset	Turnout				Registration			
	1	2	3	4	1	2	3	4
Effect per election	-0.463 (0.373)	-0.305 (0.212)	-0.364* (0.191)	-0.153 (0.166)	-0.006 (0.245)	-0.275 (0.172)	-0.136 (0.155)	-0.165 (0.146)
Pre-treatment mean	39.6	39.6	39.3	38.9	77.3	80.0	82.5	84.8
Registrant-developments	135,210	112,077	87,018	70,380	135,210	112,077	87,018	70,380
Registrant-dev.-elections	135,210	224,154	261,054	281,520	135,210	224,154	261,054	281,520

Most estimates insignificant; no pre-trends